

# SAAMI®

SPORTING ARMS AND AMMUNITION MANUFACTURERS' INSTITUTE, INC.

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## Recommendations for Safe Ammunition Storage and Handling

### INTRODUCTION

This pamphlet has been prepared by the Sporting Arms and Ammunition Manufacturers' Institute, Inc. (SAAMI) and is part of our commitment to safety. SAAMI was created in 1926 at the request of the United States government to create standards for safety and reliability in the design, manufacture, transportation, storage and use of firearms, ammunition and components. This information is furnished to interested persons as a courtesy and in the interest of promoting safety. It is not intended to be comprehensive and is subject to revisions as additional knowledge and experience are gained. SAAMI expressly disclaims any warranty, obligation, or liability whatsoever in connection with the use of information contained herein.

These paragraphs are meant to give readers certain basic and important facts about the properties of sporting and law enforcement ammunition, as well as recommendations for safe storage and handling. This information should dispel some of the rumors and myths about the safety of sporting ammunition. These statements and recommendations do not supersede local, state or federal regulations. Should you find these recommendations in conflict with regulations, please contact SAAMI so we can provide fact-based information with the goal of promulgating regulations that adequately protect safety without creating unjustified burdens.

### PROPERTIES OF SPORTING AMMUNITION

All sporting and law-enforcement ammunition

manufactured by SAAMI-member companies is carefully engineered and manufactured as an article of commerce. It has a specific use. Ammunition should always be stored and handled in a proper manner, and used as intended in firearms in good condition and designed for the specific cartridge.

Manufacturers package ammunition in cartons and boxes to meet criteria as specified by the U.S. Department of Transportation and The United Nations Model Regulations.

Smokeless powder is a unique product. For example, powder in consumer packaging will burn but not explode. However, even a small amount ignited in the confined space of the chamber of a firearm will result in a significant but managed increase in pressure, which drives the projectile down the bore of the firearm at highly repeatable pressures and velocities. Individual cartridges and shotshells should only be used for their intended purpose. Individual cartridges and shotshells will burst if ignited outside the chamber of a firearm. A burst cartridge or shotshell may project the primer and possibly the projectile and/or fragments of case material. It is also important to remember that cartridges may ignite if the primer is struck when the cartridge is dropped, struck, or otherwise mishandled. However, it is important to note that if one cartridge ignites and bursts, it will not cause surrounding cartridges to ignite.

In the event of a fire in an area where sporting



ammunition is stored, firefighter turnout gear will offer protection but should be kept on until a fire is fully extinguished. It is important to note, however, that if a cartridge is chambered in a firearm and ignited by the heat of a fire, it will send the projectile down the barrel with the same velocity and energy as if the trigger were pulled. Visit [saami.org/videos/sporting\\_ammunition\\_and\\_the\\_firefighter.cfm](https://saami.org/videos/sporting_ammunition_and_the_firefighter.cfm) for a video that more fully discusses and demonstrates the properties of ammunition in different fire situations.

Temperature and humidity may affect the performance of ammunition. Factory fresh ammunition will function properly in conditions ranging from dry arctic regions to tropical rainforests;



however, extended exposure to high temperatures and/or high humidity may damage ammunition. Often the degradation will result in lower pressures, incomplete burning, or failure to fire, but

sometimes the degradation may result in increased pressures.

Contact with water, solvents, petroleum products, ammonia, and similar chemicals may render the primer and/or the powder non-functional. These chemicals can find their way into the cartridge to contaminate the powder and/or primer mixture. External contact with the cartridge can also cause corrosion to the cartridge case and make it unsafe to fire by either preventing proper chambering, weakening the case wall, or both.

Repeated exposure to heavy recoil can also damage cartridges and shotshells.

### STORAGE GUIDELINES

- Ammunition should be stored in its original packaging or other packaging designed for the purpose.
- Ammunition should be stored in a cool, dry location away from solvents and other chemicals, heat sources, or open flames.
- It is not advisable to leave ammunition inside a vehicle or in a trunk on a hot day.
- Ammunition should be stored separately from firearms and made inaccessible to unauthorized

users such as children and other uninformed or incompetent persons. Firearms should be securely stored to prevent unauthorized access by unauthorized individuals such as children and others who are not physically or mentally capable of giving them correct, proper use and respect.



### HANDLING GUIDELINES

- Always make sure the cartridge designation on the ammunition's headstamp matches the cartridge designation marked on the firearm's barrel.
- Ammunition should chamber easily and allow the bolt or breech face to close without the use of unusual force. NEVER fire a cartridge that requires force to close the bolt or breech of any firearm.
- Inspect ammunition prior to use and properly dispose of cartridges or shotshells that show signs of physical damage, such as corrosion, deep dents and/or scratches, etc. If in doubt, do not chamber or fire the ammunition.
- The repeated re-chambering of a cartridge or shotshell in repeating firearms may cause physical damage to the case or hull, which could prevent the cartridge or shotshell from firing. It can also damage the primer pellet, resulting in a misfire. Repeated re-chambering of a cartridge can push the projectile deeper into the case and thereby reduce internal case volume and increase chamber pressure. Do not repeatedly re-chamber the same cartridge.
- When loading a magazine, do not insert fresh ammunition on top of existing ammunition. Empty the magazine and inspect the cartridges or shotshells that were removed. Reload the magazine ensuring the older ammunition is fired first.

